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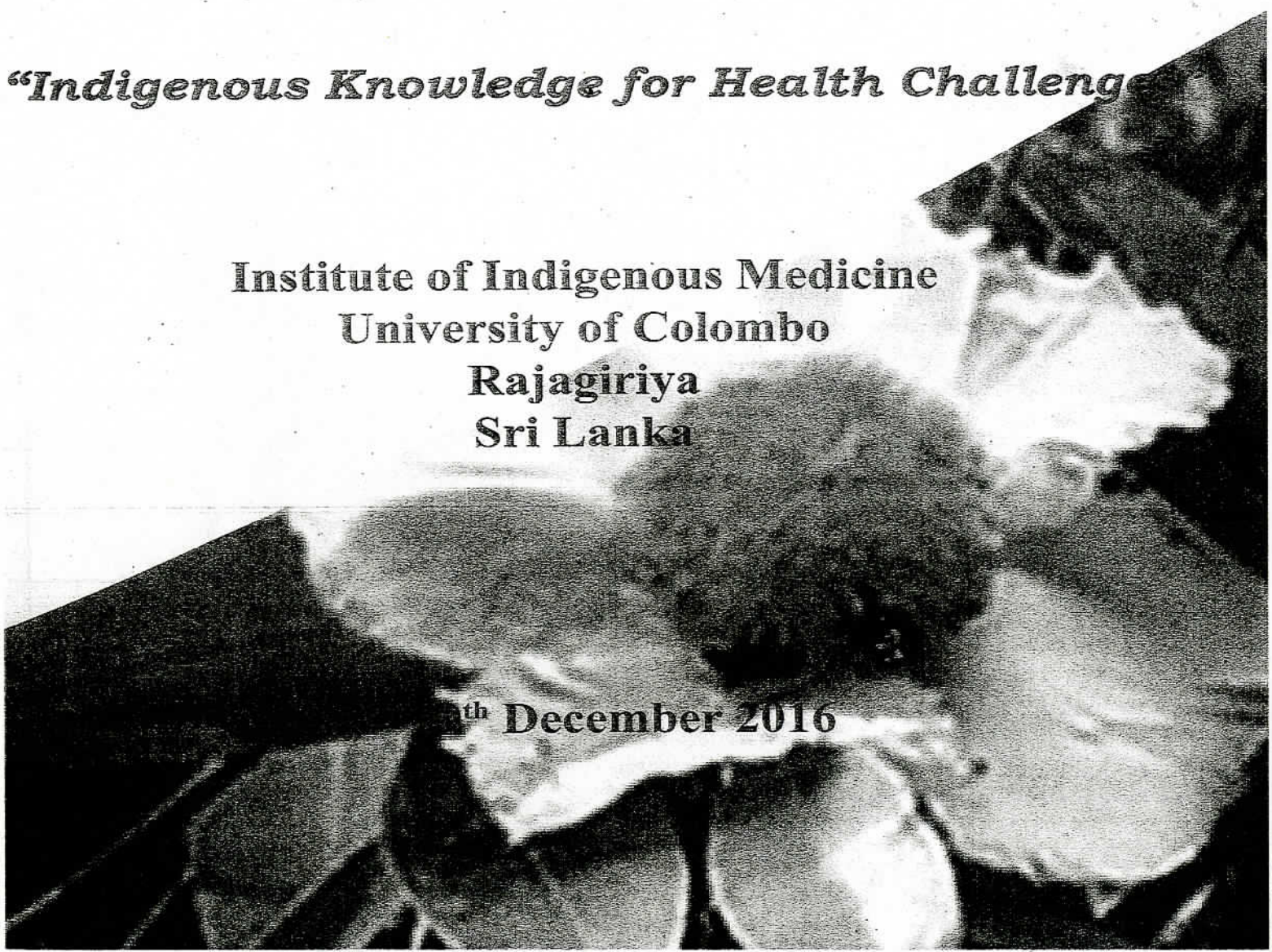

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DPPH RADICAL SCAVENGING ACTIVITY OF MATHUMEHA CHOORANAM USED IN DIABETES MELLITUS TYPE II STORED FOR SIX MONTHS IN DIFFERENT STORAGE CONDITION

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Antioxidants are significant in the preparation of human illness and may function as free radical scavengers, complexes of pro-oxidant metals, reducing agents and quencher of single oxygen formation. Mathumeha chooranam is widely used to treat the Mathumeham (diabetes mellitus) in Siddha hospitals and dispensaries. It is prepared from the leaves of *Gymnema sylvestre*, pericarp of *Terminalia chebula*, fruit of *Phyllanthus embelica*, and leaves of *Murraya keonigii* in 0.5:1: 1:1 ratio respectively.This study was initiated to evaluate the antioxidant activity (IC50) of aqueous extracts of Mathumeha chooranam and assessed by using spectrophotometer. Antioxidant activity was estimated in the cold and hot aqueous extracts of the Mathumeha chooranam stored at room temperature and at 4°C in monthly interval for six months by DPPH radical scavenging activity (Blois., 1958). The cold and hot aqueous extracts of the dried powder possess antioxidant capacity. When compared with the cold extracts of Mathumeha chooranam with hot extracts, hot extracts contained higher antioxidant capacity than cold extracts. The initial (Ic50) values of cold and hot water extracts were (41.6, 37.2), µg/ml (Ic50) dry weight respectively. When the Mathumeha chooranam was stored at room temperature for a month and the TAC (Total antioxidant capacity) was analysed, (Ic50) value of the cold and hot water extracts contained (47.4, 41.6), µg/ml dry weight respectively. When the Mathumeha chooranam was stored at room temperature for 6 months, (IC50) value of cold and hot water extracts was (1291.4, 251.7), µgl/ml dry weight respectively. While the (IC50) value of cold and hot water extracts of the Mathumeha chooranam stored at 4°C for six months respectively was (255.4, 213.8), µg/ml dry weight. The cumulative loss antioxidant capacity at room temperature on 3rd month and six months IC 50 values (inversely proportional to antioxidant activity) were (47.3,38.1), (291.4, 251.7) µg/ml dry weight respectively in cold and hot aqueous extracts. The cumulative loss at 4 ° C on 3rd month and sixth months IC 50 values e were (47.3, 38.1), (37.9, 33.6) µg/ml dry weights respectively in cold and hot aqueous extracts. When compared with the cold extracts, hot extracts contained higher DPPH radical scavenging activity. DPPH radical scavenging activity was retained better at 4°C than at Room temperature. With the storage period, the DPPH radical scavenging activity decreased from 1st month to six month at both temperatures, but decrease in DPPH radical scavenging activity was higher at room temperature than at 4 °C.

Keywords: Siddha medicine, Mathumeha chooranam, DPPH radical scavenging activity